

REMARKS

Claims 1-41 are pending in the application, and Claims 1-41 have been rejected. Applicants have: (1) amended Claims 1, 3-5, 21, 27, 31, 39, and 40; and (2) cancelled Claims 2, 29, and 30. Reconsideration is respectfully requested in view of the forgoing amendments and the following remarks. The following remarks are believed to be fully responsive to the Office Action dated October 3, 2006, and also render all currently pending claims at issue patentably distinct over the references of record.

I. Claims Rejections under 35 U.S.C. §§ 112

On page 2, the Office Action rejects Applicants' Claim 5 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting an essential element, namely a spring element for biasing the pivot arm toward the workpiece. Applicants have amended Claim 5 to now include a spring coupled to the arm and configured to bias the arm toward the workpiece.

II. Claims Rejections under 35 U.S.C. §§ 102 & 103

The Office Action rejects Applicants' independent Claim 1 under 35 U.S.C. § 102 as anticipated by each of the following references: (1) Ashjaee et al. (U.S. Pub. 2001/0035354), (2) Basol et al. (U.S. Pub. 2002/0053516), (3) Basol et al. (U.S. Pub. 2002/012144), (4) Basol et al. (U.S. Pub. 2003/0089598), and (5) Basol et al. (U.S. Pub. 2002/0134748).

Applicants have amended independent Claim 1 to recite that the plating apparatus further comprises: (1) at least one opening extending through the support plate, the electrolyte distribution plate, and the first conductive layer of the platen assembly; and (2) at least one elongated contact extending through the opening for engaging a peripheral region of the workpiece.

As acknowledged on page 6 of the Office Action, the Ashajee reference does not show or describe a platen assembly having an opening therethrough. The Ashajee reference also does not show or describe an elongated contact that extends through such an opening. Similarly, none of the cited Basol references show or describe these elements. It is well established that a reference must teach every element of a claim to properly anticipate the claim under 35 U.S.C. § 102. MPEP § 2131. As the cited references do not teach all of the features recited Claim 1,

Applicants respectfully submit that amended independent Claim 1 is not anticipated by any of the references under 35 U.S.C. § 102.

Applicants also believe that amended independent Claim 1 is patentably distinguishable over the cited references under 35 U.S.C. § 103. However, Applicants are aware that, on page 6, the Office Action asserts that it would have been obvious to one of ordinary skill in the art to have adapted the shape of the platen assembly of the Ashajee reference to include cutouts or holes therethrough and to have included contacts extending through the cutouts or holes. In support of this assertion, the Office Action cites Paragraph 0063 of the Ashajee reference as teaching that the shape of the anode plate assembly may be varied.

Applicants do not dispute that Paragraph 0063 and other portions of the Ashajee reference describe anode plates having different geometric shapes, in particular a circular shape (e.g., plate 9 shown in FIG. 16) and a rectangular shape (e.g., plate 9' shown in FIG. 22). However, Applicants respectfully submit that this does not render the plating apparatus recited in Applicants' Claim 1 obvious. Applicants' independent Claim 1 is not directed to a circular anode plate, a rectangular anode plate, or an anode plate having any other particular geometric shape. Instead, Applicants' Claim 1 is directed to a platen assembly (of any suitable shape) having at least one opening extending therethrough, and at least one elongated contact extending through the opening to contact an outer peripheral portion of the workpiece. It has already been established that the Ashajee reference does not teach a platen assembly having an opening therethrough or an elongated contact extending through such an opening. A general knowledge that the shape of the anode plate may be varied does not teach or suggest providing an opening through the platen assembly. Nor does such a general knowledge teach or suggest at least one elongated contact extending through the opening to contact the outer peripheral portion of the workpiece as recited in Applicants' Claim 1. Furthermore, the Ashajee reference does not suggest or provide motivation toward modifying its plating apparatus such that the contacts engage the outer peripheral portion of the workpiece during the plating process; to the contrary, the Ashajee reference explicitly states that the contacts "can sweep over the whole wafer frontal side surface 22," and that this is advantageous because it "[allows] conductive material plating over the whole surface 22." Column 10, Lines 3-6.

It is well-known that the prior art reference must teach or suggest all of the claimed limitations before a prima facie conclusion of obviousness is established under 35 U.S.C. § 103.

MPEP § 2142. In view of the above, it should be appreciated that the Ashajee reference does not teach or suggest a platen assembly having at least one opening therethrough or at least one elongated contact extending through such an opening to engage the peripheral portion of the workpiece. As a result, the Ashajee reference cannot render obvious Applicants' amended independent Claim 1 under 35 U.S.C. § 103. Thus, for the foregoing reasons, Applicants respectfully submit that amended independent Claim 1 is allowable over the Ashajee reference and the other references of record.

Before leaving the subject of Claim 1, Applicants wish to briefly address the use of the term "result-effective variable" on page 6 of the Office Action. Applicants recognize this term as originating from § 2144.05 of the MPEP, which addresses the obviousness of ranges. MPEP § 2144.05 states that, before a particular claimed parameter may be considered obvious, "[the] particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Applicants emphasize that Claim 1 does not recite an anode plate having an optimum shape or dimension. Furthermore, Applicants note that, by providing openings through the platen assembly and elongated contacts extending therethrough, the plating apparatus recited in Applicants' Claim 1 is configured such that the contacts maintain contact with a peripheral region of the workpiece through the plating process. As explained in Applicants' Paragraphs 0088-0089, this configuration allows the workpiece's entire front surface to be polished during the plating process while minimizing the likelihood of scratching or otherwise damaging the major inner portion of the workpiece. Varying the geometric shape or size of the platen assembly alone cannot accomplish this result. Consequently, no amount of routine experimentation with respect to the size and shape of the platen assembly would yield a plating apparatus including the specific combination of elements recited in Applicants' amended independent Claim 1.

Applicants' Claim 2 has been cancelled in view of the amendments made to Applicants' independent Claim 1.

Applicants' Claim 3-28 each depend, either directly or indirectly, from Applicants' amended independent Claim 1 and are thus believed allowable therewith. Due to the cancellation of Applicants' Claim 2, Applicants' Claims 3, 4, and 27 have each been amended to depend directly from Applicants' amended independent Claim 1. Similarly, Applicants' Claims 5 and 21 have been amended to accord with terminology introduced into Applicants' independent Claim 1 by way of amendment.

Applicants' Claims 29 and 30 have been cancelled.

The Office Action rejects Applicants' independent Claim 31 under 35 U.S.C. § 102 as anticipated by Basol et al. (U.S. Pub. 2002/0053516) and by Basol et al. (U.S. Pub. 2003/0089598). Applicants have amended independent Claim 31 to recite that the platen assembly further comprises a recess formed in the first side thereof, and that the first contact rail includes an elongated contact extending through the recess for engaging the peripheral region of the workpiece. An example of such a plating apparatus is shown in Applicants' FIG. 23. The cited Basol references do not show, describe, or suggest a platen assembly having a recess in a side thereof or an elongated contact extending through such a recess. Applicants' thus believe that neither of the cited Basol references anticipates Applicants' amended independent Claim 31 under 35 U.S.C. § 102. For this reason, and for those discussed above in conjunction with Applicants' Claim 1, Applicants respectfully submit that Claim 31 is allowable over the references of record.

Applicants' Claims 32-38 each depend, either directly or indirectly, from Applicants' independent Claim 31 and are thus believed allowable therewith.

Applicants' independent Claim 39 has been rejected under 35 U.S.C. § 102 as anticipated by each of the following references: (1) Ashjaee et al. (U.S. Pub. 2001/0035354), (2) Basol et al. (U.S. Pub. 2002/0053516), (3) Basol et al. (U.S. Pub. 2002/012144), (4) Basol et al. (U.S. Pub. 2003/0089598), and (5) Basol et al. (U.S. Pub. 2002/-134748). Applicants have amended independent Claim 39 to recite features similar to those now recited in Applicants' independent Claim 1; i.e., at least one opening through the electrolyte distribution plate and at

least one elongated contact extending through the opening for engaging an outer peripheral portion of the workpiece. Thus, for the reasons discussed above in conjunction with Applicants' amended independent Claim 1, Applicants believe that amended independent Claim 39 is allowable over the cited references.

Applicants' independent Claim 40 has been rejected under 35 U.S.C. § 102 as anticipated by the Ashjaee reference. In addition, Applicants' Claim 40 has been rejected under 35 U.S.C. § 103 as being unpatentable over Basol et al. (US Pub. 2002/0053516), Basol et al. (US Pub. 2002/0121445), or Basol et al. (US 2003/0089598) in view of the Ashjaee reference. Applicants have amended independent Claim 40 to recite features similar to those now recited in Applicants' independent Claim 1; i.e., at least one cutout extending through the support platen and the electrolyte distribution plate and at least one contact extending through the cutout. Consequently, Applicants believe that amended independent Claim 40 is allowable over the cited references for the reasons explained above in conjunction with Applicants' amended independent Claim 1.

Applicants' Claim 41 directly depends from Applicants' amended independent Claim 40 and is thus believed allowable therewith.

III. Prior Art Made of Record but Not Relied Upon

After reviewing the references made of record but not relied upon, Applicants believe that these references, whether taken singularly or in combination, do not form the basis of a valid rejection to claims.

IV. Conclusion

In view of Applicants' forgoing amendments and remarks, it is respectfully submitted that the rejections set-forth in the Office Action dated October 3, 2006 have been overcome. Accordingly, Applicants respectfully submit that the Application is now in condition for

allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants' attorneys at (480) 385-5060. If for some reason Applicants have not requested a sufficient extension and/or has not paid a sufficient fee for this Response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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